The current issue and full text archive of this journal is available at
www.emeraldinsight.com/0951-3574.htm

What gets measured gets ... on indicating, mobilizing and acting

Bino Catasús
Stockholm University, Stockholm, Sweden, and
Sofi Ersson, Jan-Erik Gröjer and Fan Yang Wallentin
Uppsala University, Uppsala, Sweden

Received 15 September 2004
Revised 8 December 2005,
21 April 2006
Accepted 26 July 2006

Abstract

Purpose – The purpose of this paper is to empirically investigate the relationship underlying the often used adage "what gets measured gets managed".

Design/methodology/approach – The paper starts by reviewing the critique of the adage and then testing it by surveying 109 managers from 41 organizations. The paper includes the idea of mobilizing in the adage in order to highlight that there are other factors than indicating, which affect acting. In the positive test the paper uses the linear structural relations (LISREL) method to analyze the data.

Findings – The paper finds that that the relationship between indicating and acting is not significant and that the introduction of mobilizing gives a better model fit. As a result the reformulation of the adage is: "What gets mobilized gets managed, especially if it gets measured".

Research limitations/implications – The paper shows that measuring is not *per se* a means to activate the organization. Rather, measurements support those issues that are already important in the organization. In practical terms, a reformulation could be: what gets talked about gets done, especially if there are numbers.

Practical implications – The contribution of this paper is twofold. First, it finds no significant relationship between indicating and acting; and second, it introduces mobilizing to explain the relationship between indicating and acting.

Originality/value – The paper scrutinizes the conventional wisdom encapsulated in the adage and by introducing mobilizing as an additional variable. The findings suggest that the adage needs to be reformulated.

Keywords Organizations, Society, Performance measures, Sweden, Measurement

Paper type Research paper

Measurements have a strong position in today's society. It could even be suggested that we are entering into an age of organizational measurability. This position is consistent with Power (1997), who painted the dawn of the audit society, and to Day and Klein (1987), who presented a development of an era of evaluation. The reasons for these increasing efforts in measuring can be understood from the continuous pursuit of objectivity in society (Porter, 1995), as well as factors pertaining to the re-organization of the public sector (Hood, 1995) and that new issues are surfacing on the societal agenda (e.g. the environment issue (Birkin, 1996)). In this respect, a measurement is a signifier of what is important in a specific moment of time since "every society keeps the records most relevant for its major values" (Dahl *et al.*, 1959, p. 108). The debates of measurements and accounts may also give insights to what conflicts are presently debated (Neimark, 1992).

Accounting, Auditing &
Accountability Journal
Vol. 20 No. 4, 2007
pp. 505-521

0951-3574
DOI 10.1108/09513570710762566

The age of measurability is likely to have been affected by the technological developments like the increasing use of information technology and the plunging costs of recording, calculating, storing and distributing numbers (Heath, 1998). Nevertheless, the technological and cost arguments do not suffice; the development is also fueled by the idea that measurements affect behavior. As one example, reward systems and compensation plans that are based on measurements have been a recurring issue, particularly in the media. Wallace (1997) tested this assertion by selecting a sample of firms that began using a residual income performance measure as a base for their compensation plans and compared their performance to a control sample. According to Wallace (ibid., p. 175), "the results generally support the adage 'you get what you measure and reward'". Similar results are presented by Biddle *et al.* (1999) in their study on EVA, performance and rewards. When studying the relationships between non-financial information and rewards, Ittner and Larcker (1995) find mixed results in their study of TQM, non-financial indicators and rewards. In a later study, Ittner *et al.* (2003), find that measurements from the balanced scorecard process, economic value measurement systems and causal business models exhibit almost no association with economic performance. Although it is hard to conclude with these mixed results from earlier research, there seems to be a tendency that financial indicators work better with financial rewards.

Concerning measurements, the issue of rewarding is not the only managerial technique fueling the increase use of measurement: the accounting body has also welcomed the increased interest of measurements. The arguments presented in the accounting literature have come from many sources, especially from the idea of coupling measurement to management (see, e.g. Lynch and Cross, 1992; Meyer, 1994; Osborne and Gaebler, 1993). This relationship is also a habitual argument in the management literature for increasing the level of measurement. This paper explores the often-cited relationship between measurement and management and takes its starting point in the adage "what gets measured gets managed".

The adage is, according to Behn (2003), "the most famous aphorism of performance measurement". At best, it promises a perfectly controllable organization. The proverb has been a potent argument for the expansion of measurements and many authors, especially those working with the balanced scorecard (cf. Kaplan and Norton, 1992, Kaplan and Norton, 1996) and those discussing the interplay between strategy with accounting (Roslender, 1996, Ward, 1992), have explicitly used it as a decisive argument. In fact, Petty and Guthrie (2000) argue that the adage was one of the main arguments that fuelled the interest of the intellectual capital movement in the beginning of 1990s. The adage has also worked as a conventional wisdom and influenced other settings, such as in health care management (Gumbus *et al.*, 2003), strategy discourse (Bartlett and Ghoshal, 1993, Stopford and Baden-Fuller, 1994), environmental management (Gray, 1992), equal opportunity (Gentile, 1994) and psychology (Latham, 2003). In sum, the relationship between measurement and management seems to attract actors from many disciplines.

Although the adage is "black-boxed" (i.e. generally accepted and seldom contested), some authors suggest that it needs to be scrutinized further. Williams (1998) finds the adage so powerful that he suggests that attention should be directed to the inappropriateness of the measurements. According to Williams (1998), numbers simplify a complex setting and can hardly represent the organization's reality. In the

same vein, Emiliani (2000) reasons that what managers measure does not correspond well to what they want done. Moreover, the critique has highlighted that there is a risk that "the measure gets managed effectively" (Emiliani, 2000, p. 613), i.e. that the number gets managed and not the underlying activity or situation. The critique is, consequently related to the problems of representation and to the behavioral aspects of a focus on the number. In another line of arguing, Lapsley (1999) is critical of the adage being applied to the public sector since it "fails to acknowledge the frailties of performance measurement in the public sector, the absence of robust measures and the potential for displacement of important elements of service which are not measurable (Lapsley, 1999, p. 203)". All in all, the critique of the adage has not been directed to whether the relationship between measurement and management is stable. One exception stands out. Otley (2003) has mollified the truism in a restatement (Otley, 2003, p. 319 italics added): "What gets measured generally gets done. And what is not measured may suffer in comparison". Although not based on an empirical study, Otley (2003) contends that it is reasonable that the presence of measurements increases the possibilities of action with the result being a half-strong association.

In conclusion, both practice and theory argue strongly for more and different measurements, referring to the adage as one of the main arguments. At the same time, the critique has primarily been built on theoretical and intuitive arguments, where empirical testing of the relationship is rare. Therefore, the saying needs further study. In this age of measurability, we want to look at the relationship between measurement and management. More specifically, our aim is to scrutinize the variables on which the adage is constructed and at the same time test the causal form between these variables in an empirical setting.

Scrutinizing the management adage

Management is a reputed aspect of theories about organizing. In the adage managing is the dependent variable that varies with the amount of measuring. In the management accounting literature it is often noted that the principal argument for working with measurements is that of achieving action (cf. Kaplan and Norton, 1996). Still, management does not reside inherently in the measurement process: on the one hand, all that is managed is not necessarily measured and on the other, all that is measured is not necessarily managed. The management literature has taught us that management also involves such things as commands (Anthony, 1965), cultures (Hofstede and Neuijen, 1990), norms (Brunsson and Olsen, 1993) and management-by-walking-around (Roueche *et al.*, 1989). In an organizational setting management often involves the active use of means to accomplish ends, and since Drucker (1954) emphasized *the practice* of management, it is reasonable to understand management as something managers do. We are left with a broad understanding of managing and although measuring is a part of that universe, we need to discriminate between acting and measuring in order to be able to examine the adage.

Acting may be seen as consciously making or hindering a change in a given state or situation and thus includes a state of passiveness (von Wright, 1971). Still, we have chosen to attend to acting as something distinct from non-acting. The main contention is that in a management discourse acting is primarily conceived of in terms of its active dimensions (Drucker, 1974). Similarly, Shenhar and Renier (1996) suggest that "management is getting results through the work of others for the benefit of the client".

This paper does not, however, focus on the results of acting (i.e. good or bad performance), and by using the term acting we want to direct attention to what is being done. Even though measuring is an act, we see measuring as something separated from acting (as managing), primarily because if this was not the case, the adage would become a logical (and meaningless) truism. Further, there seems to be a commonsensical difference between the two factors. This understanding of acting opens up possibilities to determine whether numbers activate the organization, i.e. if what gets measured gets managed.

There are different sets of measurements produced in the organization. Some measurements are not (primarily) created to facilitate day-to-day management (e.g. measurements as input in financial reports or reports keeping track of long-term trends). Measurements can be produced with the objective of seeking knowledge about thresholds (e.g. power stations) or they can aim to establish relationships between two factors (e.g. advertising spending and customer loyalty). Other measurements are produced as substitutes for measuring complex conditions relevant for managerial attention, however. Following the ideas of key performance indicators suggested by Kaplan and Norton (1992), we use the term indicators to qualify the term measurements.

The idea of indicators has been used in many settings, especially as part of a realistic ontology dominating the discourse of sustainable development. Spangenberg (2002), writing within this discourse, characterizes indicators as "a truly representative of the phenomenon they are intended to characterize". In the management of the organization, however, the criterion of a true and fair view is beyond the ambition of management. Rather than relying on standardized, audited, and generally accepted measures, pragmatism rules. An indicator is a number that management is interested in because of its efforts to manage the organization: whether the customer satisfaction index is a true and fair representation of the ephemeral idea of customer satisfaction is an ontological issue that is not at the core of the pragmatism characterizing management. From our perspective, measurements in a managerial context do not start in a disinterested activity of collecting data but from an active idea of what ought to be important to the organization. By modifying measurements into indicators, we distinguish a number that is used as an input in the managerial process from a number that chiefly aims to represent the organization. Consequently, the term indicating means the act of measuring emanating from management's intention to get the organization to attend to important issues (e.g. strategic concerns). We can now reformulate the adage so it can be examined: Indicating is positively related to acting (see Figure 1).

Although we have presented a possible distinction between indicating and acting, we still need to describe the link in the adage. A mechanistic approach to indicating suggests that by producing indicators management would (always) influence the organization to act in relation to the indicators. Such an approach also neglects that, in most cases, management needs to prioritize between all possible actions and that there is a lack of resources that cannot be solved by merely measuring. With an increased

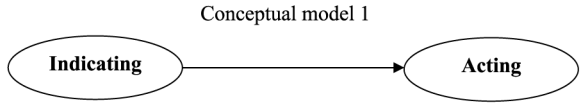


Figure 1.
The expected relation between indicating and acting

level of measurements being available, it is contestable that the attention to each and every measurement can be at an equal level. This is true since attention is a scarce resource in the organization (March and Olsen, 1976) According to Simons (1995), p. 16), attention "refers to the allocation of information processing capacity within the organization to a defined issue or agenda". Furthermore, the immediateness implicitly reassured in the adage becomes contestable in the age of measurability. First, more measurements more measurements do not inevitably lead to more management. Rather, it seems "[g]rowth and value creation … do not come automatically, and a set of mechanisms have to be mobilized in firms" (Mouritsen, 1998, p. 461). Still, these arguments do not suffice to reject the adage. Also, as noticed by Otley (2003), not all (but some) indicators lead to action and not all (but some) action have its origin in indicating. By scrutinizing the adage in this way, it seems reasonable to add another variable to the relationship, namely mobilizing.

We introduce the term mobilizing to emphasize that there is an arena where the organization not only seeks attention but also finds resources and a sense of direction. Mobilizing can be understood as the process of moving an organization from a state of passiveness to a state of activeness: to mobilize is to marshal resources (of all kinds) to promote acting. Typically, mobilizing is about talking and although it is not obvious that talking differs from acting (at least not in modern service organizations), there are both a commonsensical difference and a theoretical field implicating a difference (Brunsson and Adler, 1989, Czarniawska-Joerges, 1988). Mobilizing is the act of summoning attention, resources and strategies for acting. Consequently, we have another reformulation of the adage: Indicating together with mobilizing is positively related to acting (see Figure 2).

As a result of this reformulation, the design of the study of the adage should not only take into account the causal form suggested in conventional wisdom but also include mobilizing as a connecting point in the relationships.

Design of the study

To examine and understand the management adage we wanted to find a management discourse in which all three concepts are present. Furthermore, we wanted an empirical setting where there could be variations in levels of the variables reflecting the concepts. In Sweden, the field of intangibles may offer such an opportunity. The Nordic countries have been called the forerunners in the measurement of intangible resources (Chaminade and Johanson, 2003). However, the Swedish debate influencing management control today is highly focused on a specific intangible resource, namely working conditions in general and health issues in particular. The working conditions in Sweden have worsened during the past years (AHÄ, 2002). Adding to

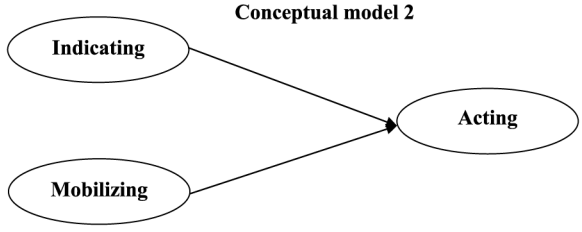


Figure 2.
The expected relation between indicating and acting when mobilizing is included in the model

this, the form of the age pyramid of the population of Sweden today resembles that of the rest of Europe. In fact, a relative big proportion of the workforce will be retiring soon. The fight to keep and recruit the right competences in the labor market has become more intensive. In a Swedish context, the issue of working conditions is at the top of the political and managerial agenda.

In 2002, the Swedish Ministry of Finance presented a study (Nyman *et al.*, 2002) called "The Swedish sickness". The crux of Nymen *et al.* (2002) study was that Sweden had the highest sick leave of all European countries. In a governmental report (SOU, 2002, p. 5) the working conditions were pinpointed as one of the reasons why 4.4 percent of all employees, on average, were absent from work because of sickness (Nyman *et al.*, 2002). A study of the number of times the term sick leave is included in printed newspapers might work as an indicator of the increased interest. According to Artikelsök[1] (a database including newspaper articles from the daily and weekly press in Sweden), sick leave was mentioned 20 times in 2001, 192 times in 2002 and 188 times in 2003. Work conditions in general and sick leave in particular was at the "top of mind" in the Swedish public discourse when this study was carried out.

Any effort to measure a complex concept such as working conditions immediately interferes with the ambition of finding a true representation. At the same time, the discourse of working condition has come to have such a position that many organizations are discussing the working condition issues more systematically. It is not surprising, then, that while recognizing the difficulties in finding good representations of health, there has been efforts to create accounts for health (PRISMA)[2], In fact, even a balance sheet of the welfare situation in Sweden (Lundberg and Palme, 2002) has been published. There has also been some efforts directed towards measuring the working conditions of the organization (Catasús and Gröjer, 2003), efforts that have indicated the possible use of indicators as a means of creating attention, obtaining resources and acquiring information about emerging challenges. In sum, the Swedish context makes a possible case of studying specific indicators developed for capturing the working conditions. These indicators are characterized by being mainly non-financial, having societal actuality and potentially being of interest to management (Tables I and II).

Those requirements (as well as excellent access to managers) led us to 21 regional and self-governed social insurance offices and 20 regional and self-governed county labor boards. The social insurance offices are responsible for social security matters, such as payment for sick leave, and the labor boards for employment matters and are all affected by "the Swedish sickness". For our purposes, these 41 organizations are a part of an empirical setting in which testing the adage is advantageous (see Figures 3 and 4) (see also Tables III and IV).

As a first step, a questionnaire was developed with items that measure the three concepts: indicating (IND), mobilizing (MOB) and acting (ACT) (Appendix, Figure A1).

Table I.
The use of working condition indicators in general (100 percent, $n = 109$)

Answer alternative	Use of working condition indicators (%)
Not at all	18
To a small extent	46
To a relatively great extent	31
To a great extent	5

Working condition	To what extent it is measured (%)	Ranking	To what extent it is discussed (%)	Ranking
Sick leave, long	81	1	77	4
Wage structure	74	2	89	3
Sick leave, short	67	3	52	7
Equality between sexes	64	4	47	8
Work load	48	5	100	1
Competence development	40	6	98	2
Personnel turnover	34	7	58	5
Job security	33	8	58	6
Personnel responsibility	24	9	34	9

Table II.
The specific use of and talk about working condition indicators

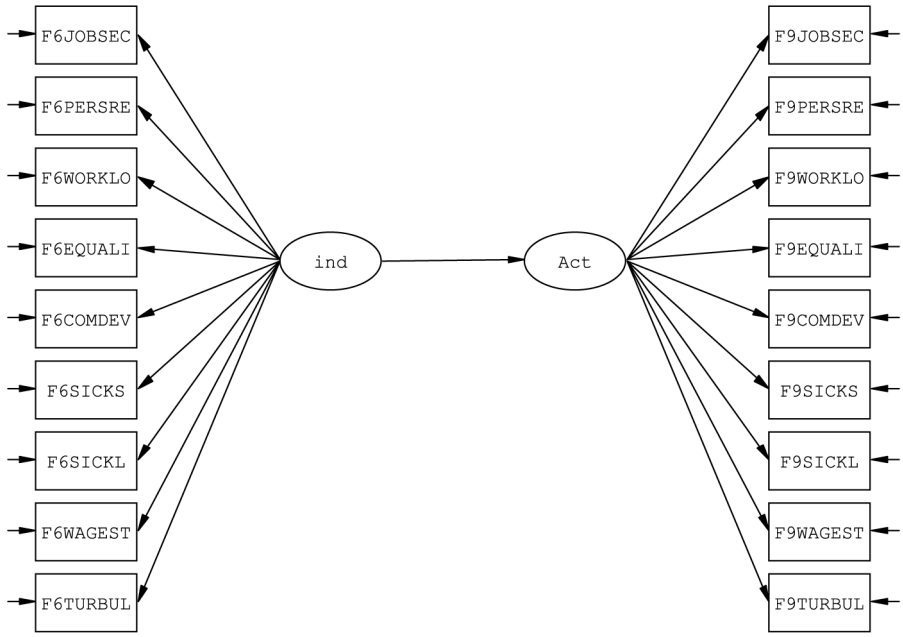


Figure 3.
The confirmatory factor analysis model illustrating the relationships between the observed variables and the two constructs IND and ACT

Specifically, the questions were designed to measure nine working conditions. Nine questions asked about "the use of indicators" (labeled IND, question 6 in the Appendix, Figure 5). To determine whether the organization was acting (ACT) in relation to the working conditions the managers were asked to estimate to what extent their department actively worked with a specific working condition (labeled ACT, question 9 in the Appendix). With these two sets of questions, we make it possible to test conceptual model 1, i.e. the relationship between indicating and acting:

In order to find proxy for MOB we needed to make operational the idea of gaining attention and marshalling resources. We chose to measure MOB as "talk about working conditions" (labeled, MOB, question 7 in the Appendix). Arguably, "talking about" is a crude proxy for mobilizing. Nevertheless, by emphasizing an issue and

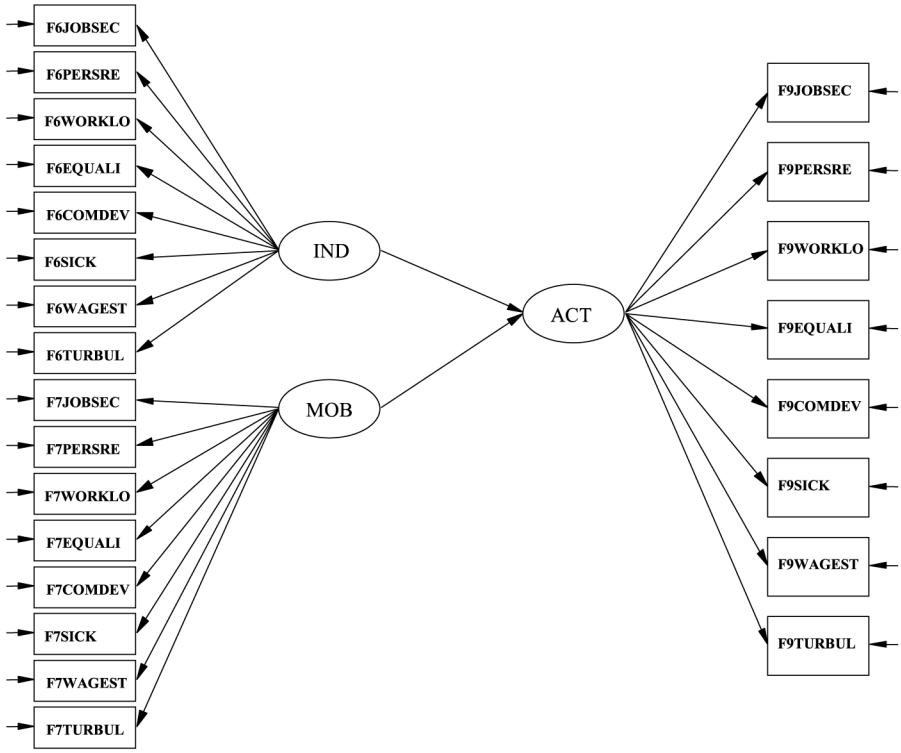


Figure 4.
The confirmatory factor analysis model illustrating the various relationships between the observed variables and the three constructs IND, MOB and ACT

Concept	Definition
Working conditions	Working conditions refer to personnel-related key ratios, such as personnel turnover, sick leave, education cost per employee, number of female managers and age structure
Job security	Questions concerning all forms of employment, such as full and part time jobs, temporary jobs and positions with conditional tenure
Personnel responsibility	Number of employees per personnel responsible person (manager)
Workload	Questions concerning working pace, stress, overtime, etc.
Equality between sexes	Questions related to all aspects of equality
Competence development	Questions concerning education and learning at work
Sick leave, short term	Sick leave less than 14 days
Sick leave, long term	Sick leave more than 14 days
Wage structure	Questions concerning benefits, wages and other material working conditions
Personnel turnover	Questions concerning the number of persons newly employed and resigned, i.e. turbulence at the workplace

Table III.

Constructs	Latent variable
Indicating	x1 = use of indicators to visualize job security (F6jobsec) x2 = use of indicators to visualize personnel responsibility (F6persre) x3 = use of indicators to visualize workload (F6workl) x4 = use of indicators to visualize equality between sexes (F6equali) x5 = use of indicators to visualize competence development (F6comdev) x6 = use of indicators to visualize sick leave, short term (F6sicks) x7 = use of indicators to visualize sick leave, long term (F6sickl) x8 = use of indicators to visualize wage structure (F6wagest) x9 = use of indicators to visualize personnel turnover (F6turbul)
Mobilizing	y1 = discussing job security with employees (F7jobsec) y2 = discussing personnel responsibility with employees (F7persre) y3 = discussing workload with employees (F7worklo) y4 = discussing equality between sexes with employees (F7equali) y5 = discussing competence development with employees (F7comdev) y6 = discussing short term sick leave with employees, (F7sicks) y7 = discussing long term sick leave with employees, (F7sickl) y8 = discussing wage structure with employees (F7wagest) y9 = discussing personnel turnover with employees (F7turbul)
Acting	z1 = actively working with job security (F8jobsec) z2 = actively working with personnel responsibility (F8persre) z3 = actively working with workload (F8worklo) z4 = actively working with equality between sexes (F8equali) z5 = actively working with competence development (F8comdev) z6 = actively working with sick leave, short term (F8sicks) z7 = actively working with sick leave, long term (F8sickl) z8 = actively working with wage structure (F8 wagest) z9 = actively working with personnel turnover (F8 turbul)

Table IV.
Table of overall model constructs

talking about it, time resources are allocated to that specific question. Also, the importance of talk in the organization has been witnessed by several authors (Czarniawska-Joerges, 1988; Czarniawska, 1997; Weick, 1995) and talk is being used to make sense of proposed strategies and to create attention. The table of the overall model constructs is presented in Table III.

The second step involved sending the questionnaire to two test respondents before the survey was executed. One effect of this test was that we attached a separate list regarding the questionnaire that included definitions of the different working conditions (Table IV). The two test respondents were not included in the analysis of the survey. In the third step, the questionnaires were sent to a sample of 123 operational managers at all social insurance offices and all county labor boards in Sweden. The respondents worked as managers (and were users of indicators). Two weeks later, a reminder was sent to those respondents who did not complete the questionnaire. Respondents that still did not send in their questionnaires after the reminder were contacted by phone. In total, 109 questionnaires were completed and returned, yielding a response rate of 89 percent.

There are several explanations for the high response rate. As mentioned, the questions asked about working conditions related to a current topic at both the organizational and national agenda. Further, new policies directed the 41 investigated

organizations towards attending to the working conditions in general and sick leave in particular. Another important factor influencing the respondents could be that the survey constituted a first step in a larger research project in which the National Social Insurance Board and the Labor Market Board were to take an active role, making access and research more valid. Despite the debates and political focus on this subject matter, 23 of the investigated organizations did not measure any of the nine working conditions. After removing these respondents from the dataset and excluding three respondents with missing values, the final sample included 83 respondents.

We used the linear structural relations (LISREL) to analyze our data. LISREL is "the most general method for the analysis of causal hypotheses on the basis of non-experimental data" (Vaughan and Tague-Sutcliffe, 1997, p. 917). The confirmatory factor analysis model with the three constructs (i.e. IND, MOB and ACT, model 2) is illustrated in Figure 4. The factors in Figure 4 relate to the overall model constructs presented in Table III.

The model may be given as an equation, with ACT as the dependent variable and IND and MOB as the two independent ones. In LISREL terms this model can be presented in the following way:

$$\eta = \gamma_1 \xi_1 + \gamma_2 \xi_2 + \zeta;$$

where:

η = Acting (ACT);

ξ = Indicating (IND);

ξ_2 = Mobilizing (MOB); and

ζ = Error team.

Note: Acting = γ_1 + γ_2 Mobilizing.

The models are estimated using a robust maximum likelihood method with LISREL software.

Results and discussion

The survey makes it possible to present some descriptive statistics in addition to testing the original adage as well as its reformulation. As expected, the study reveals that most of the respondents use working condition indicators in their organization (question 4 in the Appendix). As Table I shows, 82 percent of the respondents use working condition indicators to at least some extent.

Approximately half of the respondents that use indicators acknowledge that some of the indicators are connected in a causal relationship (question 5 in the Appendix), i.e. the respondents do not see the indicators as just-in-case-measurements. Possibly the respondents' assumptions of a causal form suggest a relative advanced use of the indicating activities. As Table II shows, many of the issues are discussed more than they are measured and the issues that are measured are mostly those that have been frequently debated in the media. Our prediction was that indicators for sick leave, which is at the top of the political agenda, would be used to a high degree. It is reasonable to conclude that the issues that have internal and external political pungency are the issues that the organizations are indicating.

The descriptive statistics provide a first opportunity to redevelop the adage. The reformulation is based on Table II and the concurrent debate in reports and in the media. The revised adage reads: "What gets debated in society gets measured". However, as can be seen in Table II, there is a difference between what the managers in the 41 organizations are indicating and what issues they are mobilizing. At the top of the mobilizing agenda is workload. Whereas only 48 percent use an indicator for work load, as many as 100 percent report that they discuss, at least to a small extent, the matter of working overtime. In other words, from our descriptive statistics, we find that indicating and mobilizing are different features in the management of the organization.

The two models from the theoretical discussion were tested using LISREL. In our tests the adage, modified as "IND is positively related to ACT" (i.e. conceptual model 1), is tested without the variable MOB. Our statistical tests show that the chi-square value is rather high (230.17) with 134 degrees of freedom, the Root Mean Square Error of Approximation (RMSEA) is 0.094, which is over the boundary 0.08 (cf. Jöreskog and Sörbom, 1993). This result suggests that the model does not fit the data well. The factor loading for IND (γ_1) is 0.25 with a T-value of 1.76, which suggests that the linear relationship is not significant. To investigate the relation between IND and ACT, we checked if there is a difference, on level of ACT, between those who are IND ($n = 83$) and those who are not ($n = 23$). There are no significant differences for the two sub-samples for seven of the nine working conditions. The only two differences concerned short- and long-term sick leave. This finding strengthens the conclusion that indicating has little relevance for acting. To sum up the tests so far, not even the restatement by Otley (2003) suggesting that "what gets measured generally gets done" is an adequate alteration of the adage. Thus, we are left with yet another alternative reformulation: "What gets measured sometimes gets managed". This statement, however, does not help us understand the causal forms of the relationship.

Next, we conducted a test of the conceptual model 2 (Figure 2) that builds on the following new revised relation: IND together with MOB is positively related to ACT. Before conducting this test, the variables Sickl and Sicks were merged into the variable Sick. The reason this was done is that the number of variables became too large in comparison with the sample size ($n = 83$). The chi-square value from this analysis was 345.32. The result can be interpreted to mean that although the value of 345.32 is still large, the model can now be accepted according to RMSEA = 0.069, which is less then 0.08. The estimated structural equation relating to the equation presented above is show in Table V.

The results show that the linear relationship between the variables ACT and MOB is significant (with a t-value = 5.86), whereas the relationship between ACT and IND, as in the conceptual model 1, is nonsignificant.

The correlation between IND and MOB is also estimated in this model. The correlation coefficient is 0.18 and the t-value is 1.20, i.e. a non-significant relationship. This led us to test a model without the variable IND, i.e. we studied the relationship

	ACT = 0.21	*	IND + 0.70	*	MOB
Standard deviation	(0.13)		(0.12)		
t-value	1.63		5.86		

Table V.

between MOB and ACT. The result (chi square = 344.28, df = 134, p-value = 0.00000, RMSEA = 0.138) shows that the model fit is much worse. Although the linear relationship between ACT and MOB remains significant, the results indicate that the latent variable IND must exist in the model to give the best fit. The one modification that seems most fitting based on our study is: "What gets mobilized gets managed, especially if it gets measured".

Conclusion and contribution

This study scrutinizes a well-known adage: "What gets measured gets managed". This is a common formulation to support the great many measuring activities seen today. Even though the catch phrase has been discussed and criticized, it is still used today. The phrase incorrectly implies a simplistic and unproblematic relation between measurements and management. We have pointed out that it is important to qualify between measuring and indicating, the latter being a number that aims to affect acting. We have also introduced mobilizing as a third variable in the adage. The main conclusion from our empirical test is that the adage needs to be revised to include the concept mobilizing. Another conclusion is that mobilizing should be part of the discourse on measurement and management in that it enriches our understanding of both indicating and acting.

Organizations should be aware that the acts of producing measurements are not enough to fuel the organization into acting. Still, we cannot minimize the impact of measurements when used as indicators because indicators support the relationship between mobilizing and acting. When comparing the two models of this study, we find that the relationship between IND and ACT is weak and that we get a much better fit when both IND and MOB are present.

The strong impact that MOB showed on ACT suggests that organizations are sensitive to what issues are discussed within the organization. Also, referring back to Table II and to the presentation of the public discourse in Sweden, there could be an impact on what is discussed in the general societal debate. By moving away from a rationalistic and functionalistic understanding of the adage to a narrative idea of dramatizing and storytelling, the concept of mobilizing finds a definite place in the adage. The numbers act as beacons around which a coherent and current story can be told. Following the metaphor, the cruise on the unknown oceans is less frightening if the route has some clear demarcation points. The production and transmission of indicators influence acting if they support the issues that receive the most esteem inside and outside the organization.

Based on the present survey data, we cannot affirm anything regarding the direction of the relations. There is evidence from experimental research that managers shift their efforts from areas that are not measured and monitored to areas that are (Ullrich and Tuttle, 2004). For Ullrich and Tuttle (2004), the direction (from indicating to acting) is clear. However, Widener (2004) reported the opposite direction, where she found empirical support for the following conclusion: "... the use of strategic human capital positively influences the use of personnel and nontraditional controls" (ibid. 2004). Here the relation goes from acting to indicating, and if we interpret Widener correctly, only in that direction. Another view may be that acting foregoes indicating. This latter position is consistent with Birkin (1996) who notes that accounting is merely a function of the political agenda. If this is the case, it seems fruitful to make use

of legitimacy theory and to introduce the accountability/responsibility concepts. In this view indicating will be a way of giving reasons for conduct (Roberts and Scapens, 1985).

Indicators have become a central component in management control systems. Although this paper has taken a first step in dealing with the issue of indicating and acting, more issues need to be addressed. We have hinted that there are differences between which issues are talked about and which are measured. According to our findings, some issues seem to have a higher potential of linking to the causal relationships between indicating, mobilizing and acting. Still, many questions remain. Is there a life cycle for indicators? Do organizations differentiate between measurements and indicators? Is there a different relationship when there are financial versus non-financial indicators? Moreover, indicators may be produced, transmitted and received for other motives than acting, such as when creating legitimacy, enhancing learning or as a component in a rewarding system.

It should be noted that this paper has not dealt with the management control system as a whole. Rather, we have only studied the diagnostic and interactive control systems (Simons, 1995). Nevertheless, this paper has emphasized the need to investigate the causes and effects of the production of indicators. Not only do we need to pursue a more refined theory of indicators (in relation to measurements), we also need to further investigate the idea of mobilizing and search for other concepts that can help our understanding of the relationship between measurement and management. In our study mobilizing was operationalized as talking and it would be worthwhile to examine other views of what may support the link between measuring and managing. The pedagogy of presenting numbers could be yet another area of future research. Another issue worth studying is the link between mobilizing and indicating. Whereas the production side of accounting has been studied extensively, the use and effects of the numbers have scarcely been studied. It has become clear to us that accounting scholars need to get involved in the debate regarding the idea of how action is related to accounting.

Notes

1. The investigation was made on 23 November 2005.
2. PRISMA stands for personnel-related indicators for strategic management accounting.

References

AHÄ (2002), *Kunskapsläge sjukförsäkringen: Delbetänkande från utredningen om analys av hälsa och arbete*, Fritzes offentliga publikationer, Stockholm.

Anthony, R.N. (1965), *Planning and Control Systems a Framework for Analysis*, Harvard Business School, Boston, MA.

Bartlett, C.A. and Ghoshal, S. (1993), "Beyond the m-form: toward a managerial theory of the firm", *Strategic Management Journal*, Vol. 14, pp. 23-46, Winter.

Behn, R.D. (2003), "Why measure performance? Different purposes require different measures", *Public Administration Review*, Vol. 63 No. 5, pp. 586-606.

Biddle, G.C., Bowen, R.M. and Wallace, J.S. (1999), "Evidence on EVA", *Journal of Applied Corporate Finance*, Vol. 12 No. 2, pp. 69-79.

Birkin, F. (1996), "The ecological accountant: from the cogito to thinking like a mountain", *Critical Perspectives on Accounting*, Vol. 7 No. 3, pp. 231-57.

Brunsson, N. and Adler, N. (1989), *The Organization of Hypocrisy: Talk, Decisions, and Actions in Organizations*, Wiley, Chichester.

Brunsson, N. and Olsen, J.P. (1993), *The Reforming Organization*, Routledge, London.

Catasús, B. and Gröjer, J.-E. (2003), "Indicators: on visualizing, classifying and dramatizing", *Journal of Intellectual Capital*, Vol. 7 No. 2, pp. 187-203.

Chaminade, C. and Johanson, U. (2003), "Can guidelines for intellectual capital management and reporting be considered without addressing cultural differences?", *Journal of Intellectual Capital*, Vol. 4 No. 4, pp. 528-42.

Czarniawska, B. (1997), *Narrating the Organization: Dramas of Institutional Identity*, University of Chicago Press, Chicago, IL.

Czarniawska-Joerges, B. (1988), *Att handla med ord: Om organisatoriskt prat, organisatorisk styrning och företagsledningskonsultering*, Carlsson, Stockholm.

Dahl, R.A., Haire, M. and Lazarsfeld, P.F. (1959), *Social Science Research on Business: Product and Potential*, Columbia University Press, New York, NY.

Day, P. and Klein, R. (1987), *Accountabilities: Five Public Services*, Tavistock, London.

Drucker, P.F. (1954), *The Practice of Management*, Harper, New York, NY.

Drucker, P.F. (1974), *Management: Tasks, Responsibilities, Practices*, Harper and Row, New York, NY.

Emiliani, M.L. (2000), "The false promise of 'what gets measured gets managed'", *Management Decision*, Vol. 38 No. 9, pp. 612-5.

Gentile, M.C. (1994), *Differences that Work: Organizational Excellence through Diversity*, Harvard Business Press, Boston, MA.

Gray, R. (1992), "Accounting and environmentalism: an exploration of the challenge of gently accounting for accountability, transparency and sustainability", *Accounting, Organizations and Society*, Vol. 17 No. 5, pp. 399-425.

Gumbus, A.B., Drothy, E. and Lyons, B. (2003), "A three year journey to organizational and financial health using the balanced scorecard: a case study at a Yale/New Haven health system hospital", *Journal of Business and Economic Studies*, Vol. 9 No. 2, pp. 54-64.

Heath, R.L. (1998), "New communication technologies: an issues management point of view", *Public Relations Review*, Vol. 24 No. 3, pp. 273-88.

Hofstede, G. and Neuijen, B. (1990), "Measuring organizational cultures: a qualitative and quantitative study across 20 cases", *Administrative Science Quarterly*, Vol. 35 No. 2, pp. 286-316.

Hood, C. (1995), "The 'new public management' in the 1980s: variations on a theme", *Accounting, Organizations and Society*, Vol. 20 Nos 2-3, pp. 93-109.

Ittner, C.D. and Larcker, D.F. (1995), "Total quality management and the choice of information and reward systems", *Journal of Accounting Research*, Vol. 33, pp. 1-34.

Ittner, C.D., Larcker, D.F. and Randall, T. (2003), "Performance implications of strategic performance measurement in financial services firms", *Accounting, Organizations and Society*, Vol. 28 Nos 7-8, pp. 715-41.

Jöreskog, K.G. and Sörbom, D. (1993), *Lisrel 8: Structural Equation Modeling with the Simplis Command Language*, Scientific Software International, Chicago, IL.

Kaplan, R.S. and Norton, D.P. (1992), "The balanced scorecard – measures that drive performance", *Harvard Business Review*, Vol. 70 No. 1, pp. 71-9.

Kaplan, R.S. and Norton, D.P. (1996), *The Balanced Scorecard: Translating Strategy into Action*, Harvard Business School Press, Boston, MA.

Lapsley, I. (1999), "Accounting and the new public management: instruments of substantive efficiency or a rationalising modernity?", *Financial Accountability and Management*, Vol. 15 Nos 3-4, pp. 201-7.

Latham, G.P. (2003), "Goal setting: a five-step approach to behavior change", *Organizational Dynamics*, Vol. 32 No. 3, pp. 309-18.

Lundberg, O. and Palme, J. (2002), "A balance sheet for welfare: Sweden in the 1990s", *Scandinavian Journal of Public Health*, Vol. 30 No. 4, November, pp. 241-3.

Lynch, R.L. and Cross, K.F. (1992), *Measure up! The Essential Guide to Measuring Business Performance*, Mandarin, London.

March, J.G. and Olsen, J.P. (1976), *Ambiguity and Choice in Organizations*, Universitetsforlaget, Bergen.

Meyer, C. (1994), "How the right measures help teams excel", *Harvard Business Review*, Vol. 72 No. 3, pp. 95-101.

Mouritsen, J. (1998), "Driving growth: economic value added versus intellectual capital", *Management Accounting Research*, Vol. 9 No. 4, pp. 461-82.

Neimark, M.K. (1992), *The Hidden Dimensions of Annual Reports: Sixty Years of Social Conflict at General Motors*, Markus Wiener Publishing, New York, NY.

Nyman, K., Bergendorff, S. and Palmer, E. (2002), *Den svenska sjukan – sjukfrånvaron i åtta länder (Sickness in Sweden – sickness absence in eight countries)*, ESA Report DS, Ministry of Finance, Sweden, p. 49.

Osborne, D. and Gaebler, T. (1993), *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*, Plume, New York, NY.

Otley, D. (2003), "Management control and performance management: whence and whither?", *The British Accounting Review*, Vol. 35 No. 4, pp. 309-26.

Petty, R. and Guthrie, J. (2000), "Intellectual capital literature review: measurement, reporting and management", *Journal of Intellectual Capital*, Vol. 1 No. 2, pp. 155-76.

Porter, T.M. (1995), *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*, Princeton University Press, Princeton, NJ.

Power, M. (1997), *The Audit Society: Rituals of Verification*, Oxford University Press, Oxford and New York, NY.

Roberts, J. and Scapens, R. (1985), "Accounting systems and systems of accountability: understanding accounting practices in their organisational contexts", *Accounting, Organizations and Society*, Vol. 10 No. 4, pp. 443-56.

Roslender, R. (1996), "Relevance lost and found: critical perspectives on the promise of management accounting", *Critical Perspectives on Accounting*, Vol. 7 No. 5, pp. 533-61.

Roueche, J.E., Rose, R.R. and Baker, G.A. (1989), *Shared Vision: Transformational Leadership in American Community Colleges*, Community College Press, American Association of Community Colleges, Washington, DC.

SOU (2002), *Slutbetänkande av utredningen om handlingsplan för ökad hälsa i arbetslivet*, SOU, Stockholm, p. 5.

Shenhar, A.J. and Renier, J. (1996), "How to define management: a modular approach", *Management Development Review*, Vol. 9 No. 1, pp. 25-31.

Simons, R. (1995), *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*, Harvard Business School Press, Boston, MA.

Spangenberg, J.H. (2002), "Institutional sustainability indicators: an analysis of the institutions in agenda 21 and a draft set of indicators for monitoring their effectivity", *Sustainable Development*, Vol. 10 No. 2, pp. 103-15.

Stopford, J.M. and Baden-Fuller, C.W.F. (1994), "Creating corporate entrepreneurship", *Strategic Management Journal*, Vol. 15 No. 7, pp. 521-36.

Ullrich, M.J. and Tuttle, B.M. (2004), "The effects of comprehensive information reporting systems and economic incentives on managers' time-planning decisions", *Behavioral Research in Accounting*, Vol. 16, pp. 89-105.

Vaughan, L.Q. and Tague-Sutcliffe, J. (1997), "Measuring the impact of information on development: a LISREL-based study of small businesses in Shanghai", *Journal of the American Society for Information Science*, Vol. 48 No. 10, pp. 917-31.

von Wright, G.H. (1971), *Norm and Action: A Logical Enquiry*, Routledge & Kegan Paul, London.

Wallace, J.S. (1997), "Adopting residual income-based compensation plans: do you get what you pay for?", *Journal of Accounting and Economics*, Vol. 24 No. 3, pp. 275-300.

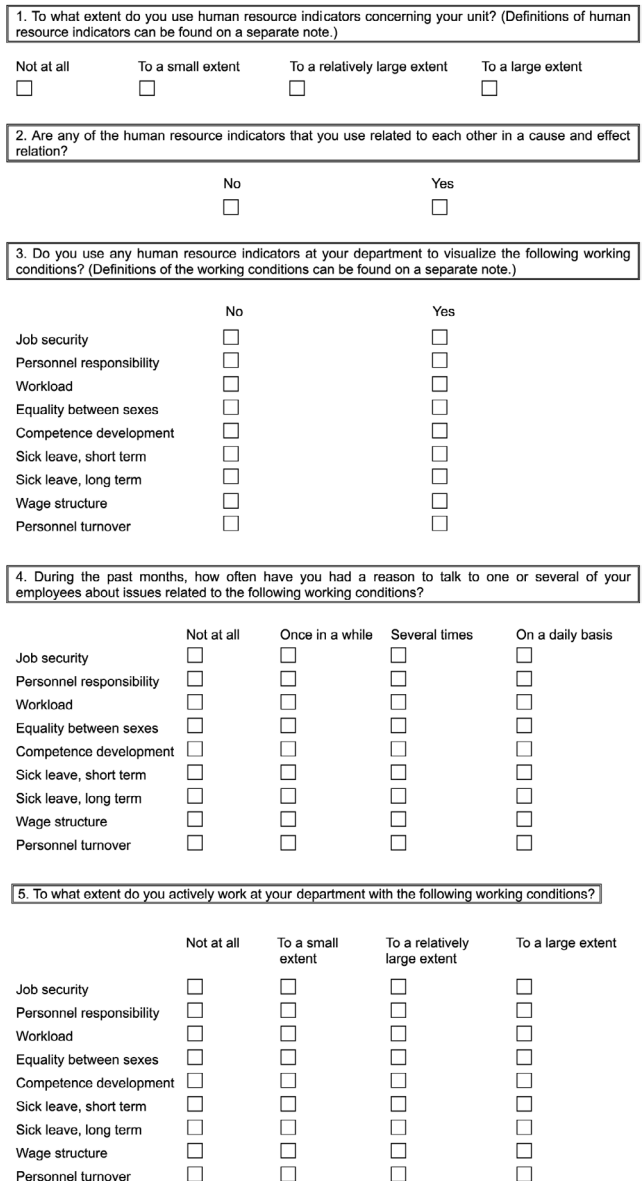
Ward, K. (1992), *Strategic Management Accounting*, Butterworth-Heinemann, Oxford.

Weick, K.E. (1995), *Sensemaking in Organizations*, Sage, Thousand Oaks, CA.

Widener, S.K. (2004), "An empirical investigation of the relation between the use of strategic human capital and the design of the management control system", *Accounting, Organizations and Society*, Vol. 29 Nos 3-4, pp. 377-99.

Williams, B. (1998), "Performance measurement and the search for meaning", *Evaluation News and Comment*, Vol. 7 No. 2, pp. 20-2.

Appendix


1. To what extent do you use human resource indicators concerning your unit? (Definitions of human resource indicators can be found on a separate note.)

Not at all ☐ To a small extent ☐ To a relatively large extent ☐ To a large extent ☐

2. Are any of the human resource indicators that you use related to each other in a cause and effect relation?

No ☐ Yes ☐

3. Do you use any human resource indicators at your department to visualize the following working conditions? (Definitions of the working conditions can be found on a separate note.)

	No	Yes
Job security	☐	☐
Personnel responsibility	☐	☐
Workload	☐	☐
Equality between sexes	☐	☐
Competence development	☐	☐
Sick leave, short term	☐	☐
Sick leave, long term	☐	☐
Wage structure	☐	☐
Personnel turnover	☐	☐

4. During the past months, how often have you had a reason to talk to one or several of your employees about issues related to the following working conditions?

	Not at all	Once in a while	Several times	On a daily basis
Job security	☐	☐	☐	☐
Personnel responsibility	☐	☐	☐	☐
Workload	☐	☐	☐	☐
Equality between sexes	☐	☐	☐	☐
Competence development	☐	☐	☐	☐
Sick leave, short term	☐	☐	☐	☐
Sick leave, long term	☐	☐	☐	☐
Wage structure	☐	☐	☐	☐
Personnel turnover	☐	☐	☐	☐

5. To what extent do you actively work at your department with the following working conditions?

	Not at all	To a small extent	To a relatively large extent	To a large extent
Job security	☐	☐	☐	☐
Personnel responsibility	☐	☐	☐	☐
Workload	☐	☐	☐	☐
Equality between sexes	☐	☐	☐	☐
Competence development	☐	☐	☐	☐
Sick leave, short term	☐	☐	☐	☐
Sick leave, long term	☐	☐	☐	☐
Wage structure	☐	☐	☐	☐
Personnel turnover	☐	☐	☐	☐

Figure A1.

Corresponding author
Bino Catasús can be contacted at: bino.catasús@fek.su.se